July 27, 1965 L. M. BODI 3,196,894

SANITARY ATTACHMENTS FOR SEWER DRAIN TRAPS

Filed May 29, 1963

FIG. 1

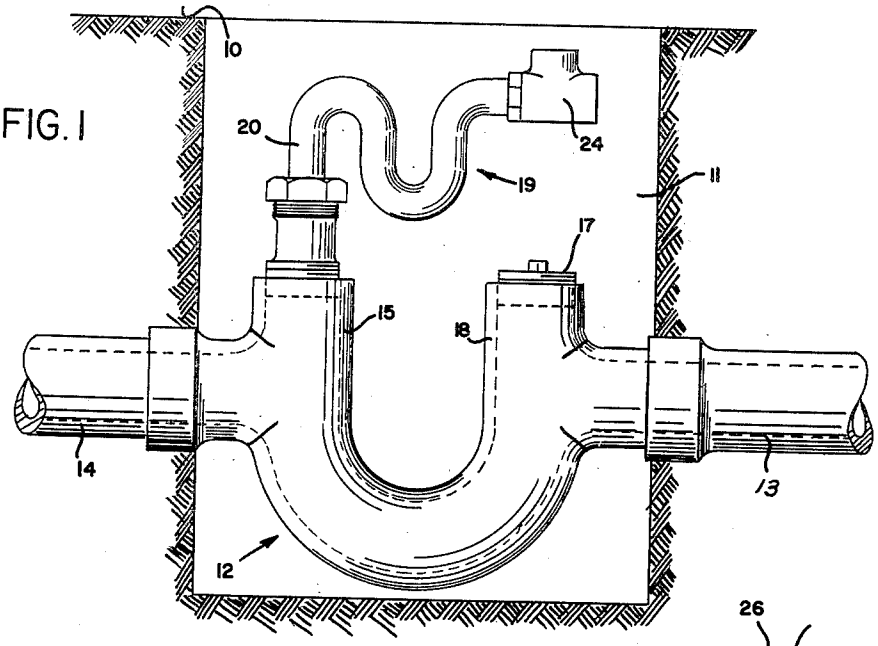
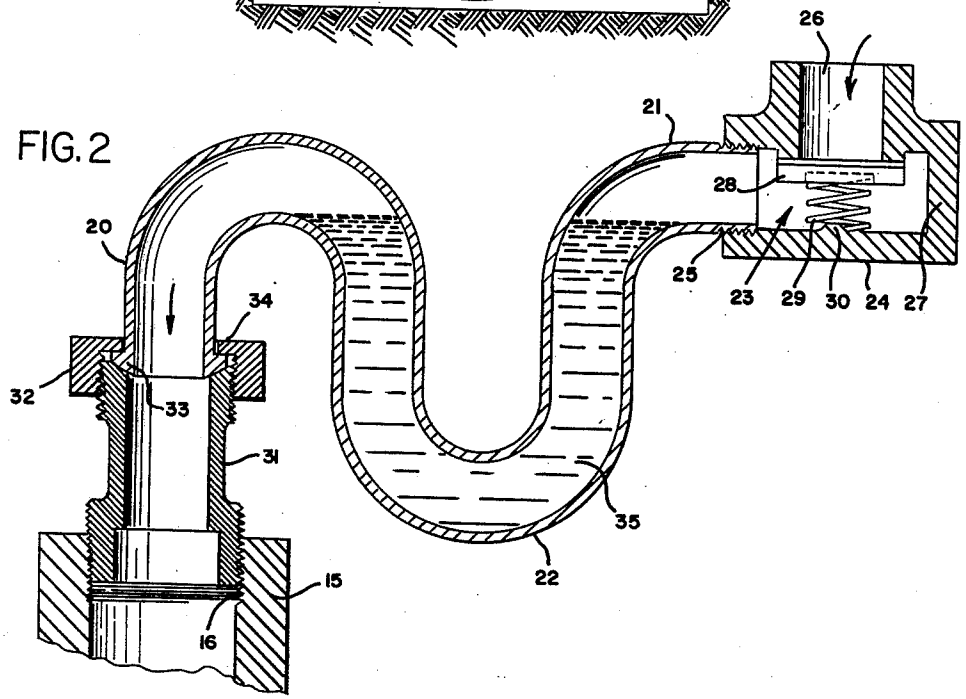


FIG. 2



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SANITARY ATTACHMENTS FOR SEWER DRAIN TRAPS

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This invention relates to sewer drain traps which are commonly placed in sunken pits in the cellars of houses and buildings, to connect the house drain with the sewer. In the case of houses located in areas which subject the cellars to flooding from time to time, it has often been the practice of the householder to remove the clean-out plug from the trap so that water accumulating in the cellar may flow out into the sewer. This is a most unsanitary condition, since sewer gases can escape into the cellar, and water from the sewer may back up through the open trap into the cellar.

The present invention aims to provide a new and improved attachment for connection to the drain trap, which permits water accumulating in the cellar to flow freely into the sewer and yet prevents any escape of gas or sewage from the sewer into the cellar.

A further object of the invention is the provision of a unitary attachment for connection with a sewer drain trap for the purpose stated, which is inexpensive in cost of manufacture and is easily installed, and which may remain as a permanent feature of the trap.

The above as well as additional and more specific objects will be clarified in the following description wherein reference numerals refer to like-numbered parts in the accompanying drawing. It is to be noted that the drawing is intended primarily for the purpose of illustration and that it is therefore neither desired nor intended to limit the invention necessarily to any or all of the exact details shown or described except in so far as they may be deemed essential to the invention.

Referring briefly to the drawing, FIG. 1 is a side elevational view of the sewer drain trap, showing a typical installation in a cellar pit, with the attachment of the present invention connected thereto.

FIG. 2 is a fragmentary enlarged vertical longitudinal section of FIG. 1.

Referring in detail to the drawing, the numeral **10** indicates a cellar floor having the pit **11** therein for installation of the drain trap **12** below the floor level to connect the house drain **13** with the sewer pipe **14**. The trap **12** usually has at least one vertical extension **15** provided with screw threads **16** for attachment of a closure plug such as that shown at **17**, on the second vertical extension **18** shown in FIG. 1.

In order to prevent flooding of the cellar, owing usually to heavy rainfall which seeps into the cellar, the householder usually removes the plug from the pipe **15** so that the flood water may flow into the sewer after rising to the top of the pipe in the pit.

In order to avoid the undesirable consequences of an open trap, the present invention provides an auxiliary connection or attachment **19**. This consists of a length of bent pipe having a vertical end **20** and a horizontal end **21**, with a rounded U-shaped water seal intermediate portion **22**. At the far end **21** the attachment **19** is provided with a check valve **23** which is here shown contained in a T-coupling **24** screwed at **25** to the end of the pipe, the passage through this coupling having its

only outlet at **26** through the top thereof, as its outer end wall **27** is closed, either in the manner shown or by means of a plug, not shown. The check valve **23** herein illustrated is shown to include a plate **28** normally urged upward against the base of the opening or passage **26** by a spring **29** centered on a boss **30**.

The end **20** of the attachment **19** is connected to the pipe **15** through an adapter **31** in the manner illustrated and which is structurally of standard design so that it may be bought on the market. With the lock nut **32** slipped over the pipe **19** into position adjacent the flange **33** on the pipe end **20**, and with the adapter **31** screwed into the drain trap pipe **15**, the nut **32** is screwed down upon the adapter. A washer, not shown, is inserted between the annular portion **34** of the nut and the top rim of the adapter, or other washer means or sealing means may of course be made use of.

With the attachment mounted in the manner illustrated and, of course, with the top of the coupling or housing **24** positioned below the floor level **10**, it is apparent that flood water rising in the pit will, upon rising above the level of the opening **26**, open the valve **23** and pass through the connection **19** into the pipe **15** and thus onward into the sewer. Back flow of water from the sewer is prevented by automatic closing of the check valve, and water **35** in the water seal **22** further prevents sewer gases from exiting into the cellar.

While the invention has been described with particular reference to the construction shown in the drawing, such is not to be construed as a limitation upon the invention which is best defined in the accompanying claims.

The invention having thus been described, what is claimed and desired to be secured by Letters Patent is as follows:

1. In combination with a sewer drain trap mounted in a pit sunk in the floor of a cellar, the trap having at least one vertical clean-out extension rising therefrom to a level substantially below said floor, an attachment wholly positioned below said floor consisting of a length of pipe having a U-shaped bend approximately intermediate its length and having one end thereof positioned above and in alignment with said extension, means for connecting said one end of the pipe to the upper end of said extension, the other end of said pipe having a housing thereon provided with a passage therethrough, one end of said passage communicating with said pipe, and a normally closed check valve positioned in said passage, said U-shaped bend providing a water seal.

2. A combination according to claim **1**, said passage through said housing having the other end thereof exposed at the top of the housing.

3. A combination according to claim **1**, said means comprising an adapter sleeve having one end thereof screwed into the top of said extension and the other end thereof secured to said one end of the pipe to provide a through passage between said extension and said pipe.

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